

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on page 14, line 17, as follows:

As a result of forwarding stricter theoretical analysis, the present inventor has found that devising a combination of pump characteristics and piston makes it possible to obtain a generated pressure (secondary squeeze pressure) equal to or higher than the squeeze effect even with a sufficiently wide gap between the piston end face and its relatively moving surface. The present inventor has already proposed an ultrahigh-speed intermittent discharge device which, it is claimed as implementable, is easy to handle in practical use, high in flow-rate precision and high in reliability to powder and granular materials on the basis that only simple control of the gap of the piston end face is required and the total discharge amount per dot can be set by the pump rotating speed by virtue of the above-described effect (Japanese patent application No. 2003-341003; ~~unpublished~~ which was published as Unexamined Japanese Patent Publication No. 2004-141866) (US patent application serial No. 10/673,495).

Please amend the paragraph beginning on page 32, line 19, as follows:

When the gap h is changed by a high frequency, a fluctuating pressure is generated to the discharge chamber 17, which is a gap portion between the piston end face 10 and its opposing surface 11, by the later-described secondary squeeze effect found in a previous proposal (Japanese patent application No. 2003-341003; ~~unpublished~~ which was published as Unexamined Japanese Patent Publication No. 2004-141866) (US patent application serial No. 10/673,495).

Please amend the paragraph beginning on page 33, line 19, as follows:

In the present invention, many findings can be derived from fundamental equations of the squeeze pump (tentative name), which form the principle of the present invention. Although the derivation method of these fundamental equations has already been proposed by the present inventor in Japanese patent application No. 2003-341003 (unpublished which was published as Unexamined Japanese Patent Publication No. 2004-141866)-(US patent application serial No. 10/673,495), its contents are described again.

Please amend the paragraph beginning on page 51, line 13, as follows:

The above-described findings, although already described in the Specification of Japanese patent application No. 2003-341003 which was published as Unexamined Japanese Patent Publication No. 2004-141866 (unpublished) (US patent application serial No. 10/673,495), were able to be proved to be consistent even with the fluid compressibility taken into consideration, from the analysis results of Figs. 9 to 11 in the present invention.